REMARKS

The Applicants respectfully request further examination and consideration in view of the amendments above and the arguments set forth fully below. Claims 1-42 were previously pending in this application. Within the Office Action, Claims 1-42 have been rejected. By the above amendments, Claim 32 has been amended. Accordingly, Claims 1-42 are currently pending.

Rejections Under 35 U.S.C. § 103

Within the Office Action, Claims 1-4, 6-11, 13-17, 19-23, 25-27, 29-34 and 36-40 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication No. 2002/0194309 to Carter (hereinafter "Carter") in view of U.S. Patent Application Publication No. 2002/0046278 to Hays et al. (hereinafter "Hays"). Applicants respectfully disagree.

Carter teaches a system and method for synchronizing a multiplicity of devices in a multimedia environment which includes a multimedia device, a multimedia database, a portable multimedia player, a personal computer and a master digital multimedia device. [Carter, Figure 1] The multimedia database is an online collection of audio and video works. [Carter, ¶ 28] The recorded multimedia works are able to be *categorized* by format. [Carter, ¶ 28] The multimedia environment also includes a control unit which provides a means to select and play a multimedia work via keys and commands for operations such as start, stop, skip, repeat, shuffle and save, and a display to display information about a selected work. [Carter, ¶ 30] A user is able to *select* desired multimedia works to be synchronized and downloaded for storage on a digital multimedia device from the music multimedia database. [Carter, ¶ 31] As is recognized within the Office Action, Carter does not teach a content directory service to maintain *directory information related* to new content received. It is also recognized within the Office Action that Carter also does not teach an *interface layer* coupled to communicate with the synchronization application and the content directory service to provide update information to the content directory service regarding new content data received by the database from the external device during the content data synchronization. Additionally, Carter does not teach a *content directory service* to browse the content data stored in the database and to provide information regarding the content data stored in the database. Similarly, Carter does not teach the methods of *synchronizing* data as claimed herein.

Additionally, Carter is cited as teaching automatically providing update information. Specifically, Carter ¶31 is cited which states, "digital multimedia device 104 allows the user, via the control unit 314 means, to request and download entirely new recorded data into the digital multimedia device 104 or program the digital multimedia device 104 to synchronize and update the user's audio/video files automatically from a multimedia database." However, the claim limitations of the presently claimed invention include "without user intervention," and Carter clearly teaches that "the user" requests and downloads or programs the digital multimedia device, which clearly requires user intervention. Furthermore, Carter does not teach automatically providing *update information* regarding *new content data.*

Hays is cited in the Office Action as teaching a content directory service to maintain directory information related to new content received and to browse the content data stored in the database. Hays is also cited in the Office Action as teaching a server interface. However, Hays teaches a distribution system including a server and collection kiosks for distributing content for a medical information collection system. Hays also teaches:

> The kiosk clients, which are implemented at the collection kiosks, include a web browser (not shown), web pages 811, a server interface 812, and a client database 813. The web pages define the user interface for the collection kiosks. The description of these web pages (e.g., HTML documents) along with additional content (e.g., .gif files) may be stored in a certain directory of the file system. A user of the collection kiosk uses the browser to browse the various web pages. The server interface is responsible for accessing the central medical information system to retrieve updated content and registered user updates. In one embodiment, the server interface acts as an FTP client to retrieve updated content and user updates from the central medical information system. The server interface may periodically (e.g., daily) established an FTP connection to retrieve the updated content and user information. The server interface stores the updated content in the web page directory to overwrite or augment existing web page content or updates a registered user table to reflect the updated user information. The client database thus contains the identification of each of the users of the central medical information system along with the medical information collected at that collection kiosk. [Hays ¶26]

Within the Office Action, Hays ¶26 is cited as teaching a content directory service to browse the content data stored in the database. Hays ¶26 is also cited as teaching a server interface for accessing the central medical information system to retrieve updated content and storing the updated content in the web page directory. However, Hays still does not teach an interface layer coupled to communicate with the *synchronization application* and the content directory service to discover the new content data and provide update information to the content directory service

regarding the new content data received by the database from the external device during the content data synchronization. Hays does not teach synchronization. Hays specifically teaches, "[i]n block 1202, the routine requests that all the update files in the directory for this collection kiosk at the FTP server be deleted so that the files are not retrieved again." [Hays, ¶31] However, a synchronization process involves data being stored on multiple devices. Thus, if the data is deleted from the server, it is not synchronized. Furthermore, Hays teaches nothing of synchronization and never uses the words "sync" or "synchronization." Thus, Hays does not teach an interface layer coupled to communicate with the *synchronization application* and the content directory service to discover the new content data and *provide update information* to the content directory service *regarding* the new content data received by the database from the external device during the content data synchronization.

In contrast to Carter, Hays and their combination, the presently claimed invention is directed to a content directory and synchronization bridge. A first media server is coupled to one or more devices. The first media server includes a database to store content. The first media server also includes a Content Directory Service (CDS), a synchronization application, and a synchronization-CDS bridge. The synchronization-CDS bridge acts as an interface layer between the synchronization application and the CDS. The synchronization application provides data synchronization communications using one or more conventional synchronization protocols.

As is well known in the art, CDS is a service that is compliant with UPnP architecture. A UPnP network device uses the UPnP CDS to compile detailed information about each content item on the UPnP network device. Each content item that is referenced by the CDS includes various information about the content item including the transfer protocol(s) and file format(s) that the UPnP network device storing the content item can use to transfer the content item to another UPnP network device. [Present Specification, page 4, line 30 through page 5, line 2]

The synchronization application of the claimed invention enables a data synchronization process between the first media server and a web site, a remote media server, a PDA or another device. During the data synchronization process, new content is received from the remote media server by the first media server, and the new content is stored in the database within the first media server. As the new content is received by the database, the synchronization application keeps a record of the new content received. The synchronization-CDS bridge searches the synchronization application for any newly added content sent to the database. *Information* related to any new content discovered by the synchronization-CDS bridge is *sent* by the synchronization-CDS bridge to the CDS as *update information*. The CDS is updated according

to the update information received from the synchronization-CDS bridge, so that the CDS accurately reflects all content in the database, including the newly added content, subsequent to the data synchronization. [Present Specification, page 11, line 6 through page 12, line 4] Once updated, the CDS includes *directory information* related to the *new content* received. [Present Specification, page 14, lines 5-6] Data synchronization between the first media server and the web site, and between the first media server and the PDA or other device is performed in a similar manner as described above. [Present Specification, page 12, lines 5-6] As described above, Carter, Hays and their combination do not teach an interface layer coupled to communicate with the *synchronization application* and the content directory service to provide *update information* to the content directory service *regarding* new content data received by the database from the external device during the content data synchronization. Carter, Hays and their combination also do not teach the methods of synchronizing data as claimed herein. Further, Carter, Hays and their combination do not teach to automatically provide update information to the content directory service regarding the new content data received by the database from the external device during the content data synchronization without user intervention.

The independent Claim 1 is directed to a media server. The media server of Claim 1 comprises a database to store content data, a synchronization application to perform content data synchronization with an external device, a content directory service to browse the content data stored in the database and to provide information regarding the content data stored in the database and to maintain directory information related to new content received, and an interface layer coupled to communicate with the *synchronization application* and the content directory service to discover the new content data and provide update information to the content directory service regarding the new content data received by the database from the external device during the content data synchronization. As described above, Carter, Hays and their combination do not teach an interface layer coupled to communicate with the *synchronization application* and the content directory service to discover the new content data and provide update information to the content directory service regarding the new content data received by the database from the external device during the content data synchronization. For at least these reasons, the independent Claim 1 is allowable over the teachings of Carter, Hays and their combination.

Claims 2-4, 6 and 7 are dependent on the independent Claim 1. As discussed above, the independent Claim 1 is allowable over Carter, Hays and their combination. Accordingly, Claims 2-4, 6 and 7 are all also allowable as being dependent upon an allowable base claim.

The independent Claim 8 is directed to a media server. The media server of Claim 8 comprises a database to store content data, a synchronization application to perform content data synchronization with an external device, a content directory service to browse the content data stored in the database and to provide information regarding the content data stored in the database and to maintain directory information related to new content received, and an interface layer coupled to communicate with the *synchronization application* and the content directory service to discover the new content added to the database and provide update information to the synchronization application regarding the new content added to the database, wherein the new content data is synchronized with the external device during a next content data synchronization. As described above, Carter, Hays and their combination do not teach an interface layer coupled to communicate with the *synchronization application* and the content directory service to discover the new content added to the database and provide update information to the synchronization application regarding the new content added to the database, wherein the new content data is synchronized with the external device during a next content data synchronization. For at least these reasons, the independent Claim 8 is allowable over the teachings of Carter, Hays and their combination.

Claims 9-11, 13 and 14 are dependent on the independent Claim 8. As discussed above, the independent Claim 8 is allowable over Carter, Hays and their combination. Accordingly, Claims 9-11, 13 and 14 are all also allowable as being dependent upon an allowable base claim.

The independent Claim 15 is directed to a media server. The media server of Claim 15 comprises a database to store content data, a synchronization application to perform content data synchronization with an external device, a content directory service to browse the content data stored in the database and to provide information regarding the content data stored in the database and to maintain directory information related to new content received, and an interface layer coupled to communicate with the synchronization application and the content directory service to discover the new content data received by the database and provide first update information to the content directory service regarding the new content data received by the database from the external device during the content data synchronization, and to provide second update information to the synchronization application regarding the new content data added to the database, wherein the new content data is synchronized with the external device during a next content data synchronization. As described above, Carter, Hays and their combination do not teach an interface layer coupled to communicate with the *synchronization application* and the content directory service to discover the new content data received by the database and provide

first update information to the content directory service regarding the new content data received by the database from the external device during the content data synchronization, and to provide second update information to the synchronization application regarding the new content data added to the database, wherein the new content data is synchronized with the external device during a next content data synchronization. For at least these reasons, the independent Claim 15 is allowable over the teachings of Carter, Hays and their combination.

Claims 16, 17, 19 and 20 are dependent on the independent Claim 15. As discussed above, the independent Claim 15 is allowable over Carter, Hays and their combination. Accordingly, Claims 16, 17, 19 and 20 are all also allowable as being dependent upon an allowable base claim.

The independent Claim 21 is directed to a network of devices. The network of devices of Claim 21 comprises a network device, a first media server coupled to the network device, the first media server including a database to store content data, a synchronization application to perform content data synchronization with the network device, a content directory service to browse the content data stored in the database and to provide information regarding the content data stored in the database and to maintain directory information related to new content received, and an interface layer coupled to communicate with the synchronization application and the content directory service to discover the new content data received by the database and provide first update information to the content directory service regarding the new content data received by the database from the network device during content data synchronization, and to provide second update information to the synchronization application regarding the new content data added to the database, wherein the new content data is synchronized with the network device during a next content data synchronization. As further described above, Carter, Hays and their combination do not teach an interface layer coupled to communicate with the *synchronization application* and the content directory service to discover the new content data received by the database and provide first update information to the content directory service regarding the new content data received by the database from the network device during content data synchronization, and to provide second update information to the synchronization application regarding the new content data added to the database, wherein the new content data is synchronized with the network device during a next content data synchronization. For at least these reasons, the independent Claim 21 is allowable over the teachings of Carter, Hays and their combination.

Claims 22, 23, 25 and 26 are dependent on the independent Claim 21. As discussed above, the independent Claim 21 is allowable over Carter, Hays and their combination. Accordingly, Claims 22, 23, 25 and 26 are all also allowable as being dependent upon an allowable base claim.

The independent Claim 27 is directed to a method of synchronizing data between two network devices. The method of Claim 27 comprises sending first update information to a content directory service from an interface layer regarding a first new content data received by a first media device from a second media device during content data synchronization performed by a synchronization application, thereby maintaining by the content directory service directory information related to the first new content data received, and sending second update information to the synchronization application from the interface layer regarding a second new content added to the first media device, wherein the second new content data is synchronized with the second media device during a next content data synchronization. As described above, Carter, Hays and their combination do not teach sending second update information to the synchronization application from the interface layer regarding a second new content added to the first media device, wherein the second new content data is synchronized with the second media device during a next content data synchronization. For at least these reasons, the independent Claim 27 is allowable over the teachings of Carter, Hays and their combination.

Claims 29-31 are dependent on the independent Claim 27. As discussed above, the independent Claim 27 is allowable over Carter, Hays and their combination. Accordingly, Claims 29-31 are all also allowable as being dependent upon an allowable base claim.

The independent Claim 32 is directed to a method of synchronizing data between two network devices. The method of Claim 32 comprises performing data synchronization between a first media server and a second media server, receiving content data related to the data synchronization on the first media server, obtaining update information related to the received content data from *a synchronization application on the first media server*, providing the update information to a content directory service of the first media server and updating the content directory service according to the update information, thereby maintaining by the content directory service directory information related to the received content data. As described above, Carter, Hays and their combination do not teach obtaining update information related to the received content data from *a synchronization application on the first media server*. For at least these reasons, the independent Claim 32 is allowable over the teachings of Carter, Hays and their combination.

Claims 33, 34, 36 and 37 are dependent on the independent Claim 32. As discussed above, the independent Claim 32 is allowable over Carter, Hays and their combination. Accordingly, Claims 33, 34, 36 and 37 are all also allowable as being dependent upon an allowable base claim.

The independent Claim 38 is directed to an apparatus for synchronizing data between two network devices. The apparatus of Claim 38 comprises means for performing data synchronization between a first media server and a second media server, means for receiving content data related to the data synchronization on the first media server, means for obtaining update information related to the received content data from *a synchronization application on the first media server*, means for providing the update information to a content directory service of the first media server and means for updating the content directory service according to the update information, wherein the content directory service maintains directory information related to the received content data. As described above, Carter, Hays and their combination do not teach means for obtaining update information related to the received content data from *a synchronization application on the first media server*. For at least these reasons, the independent Claim 38 is allowable over the teachings of Carter, Hays and their combination.

The independent Claim 39 is directed to a media server. The media server of Claim 39 comprises a database to store content data, a synchronization application to perform content data synchronization with an external device, a content directory service to browse the content data stored in the database and to provide information regarding the content data stored in the database and to maintain directory information related to new content received, and an interface layer coupled to communicate with the synchronization application and the content directory service to automatically provide update information to the content directory service regarding the new content data received by the database from the external device during the content data synchronization without user intervention. As described above, Carter, Hays and their combination do not teach an interface layer coupled to communicate with the *synchronization application* and the content directory service to *automatically provide update information* to the content directory service regarding the *new content data* received by the database from the external device during the content data synchronization **without user intervention**. For at least these reasons, the independent Claim 39 is allowable over the teachings of Carter, Hays and their combination.

The independent Claim 40 is directed to a media server. The media server of Claim 39 comprises a database to store content data, a synchronization application to perform content data

synchronization with an external device, a content directory service to browse the content data stored in the database and to provide information regarding the content data stored in the database and to maintain directory information related to new content received, and an interface layer coupled to communicate with the synchronization application and the content directory service to automatically provide first update information to the content directory service regarding the new content data received by the database from the external device during the content data synchronization without user intervention, and to automatically provide second update information to the synchronization application regarding the new content data added to the database without user intervention, wherein the new content data is synchronized with the external device during a next content data synchronization. As described above, Carter, Hays and their combination do not teach an interface layer coupled to communicate with the *synchronization application* and the content directory service to automatically provide first update information to the content directory service regarding the *new content data* received by the database from the external device during the content data synchronization **without user intervention**, and to automatically provide second update information to the synchronization application regarding the *new content data* added to the database **without user intervention**, wherein the *new content data* is synchronized with the external device during a next content data synchronization. For at least these reasons, the independent Claim 40 is allowable over the teachings of Carter, Hays and their combination.

Rejection of Claims Under 35 U.S.C. § 103

Within the Office Action, Claims 5, 12, 18, 24, 28, 35, 41 and 42 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Carter in view of Hays and further in view of U.S. Patent No. 6,892,230 to Gu et al. (hereinafter Gu). Applicants respectfully disagree.

Claim 5 is dependent on the independent Claim 1. Claim 12 is dependent on the independent Claim 8. Claim 18 is dependent on the independent Claim 15. Claim 24 is dependent on the independent Claim 21. Claim 28 is dependent on the independent Claim 27. Claim 35 is dependent on the independent Claim 32. As discussed above, the independent Claims 1, 8, 15, 21, 27 and 32 are all allowable over the teachings of Carter, Hays and their combination. Accordingly, Claims 5, 12, 18, 24, 28 and 35 are all also allowable as being dependent on an allowable base claim.

Gu is cited as generally teaching Universal Plug and Play. [Gu, col. 5, lines 20-40] However, Gu does not teach an interface layer coupled to communicate with the *synchronization application* and the content directory service to discover the new content data and provide update information to the content directory service regarding the new content data received by the database from the external device during the content data synchronization. As described above, Carter, Hays and their combination do not teach an interface layer coupled to communicate with the *synchronization application* and the content directory service to discover the new content data and provide update information to the content directory service regarding the new content data received by the database from the external device during the content data synchronization. Accordingly, neither, Carter, Hays, Gu nor their combination teach an interface layer coupled to communicate with the *synchronization application* and the content directory service to discover the new content data and provide update information to the content directory service regarding the new content data received by the database from the external device during the content data synchronization.

The independent Claim 41 is directed to a Universal Plug and Play enabled media server. The Universal Plug and Play media server of Claim 41 comprises a database to store content data, a synchronization application to perform content data synchronization with an external device, a Universal Plug and Play content directory service to browse the content data stored in the database and to provide information regarding the content data stored in the database and to maintain directory information related to new content received, and an interface layer coupled to communicate with the synchronization application and the content directory service to discover the new content data and provide update information to the content directory service regarding the new content data received by the database from the external device during the content data synchronization, wherein the interface layer provides the update information to the synchronization application regarding the new content data added to the database, the new content data to be synchronized with the external device during a next content data synchronization. As described above, Carter, Hays, Gu and their combination do not teach an interface layer coupled to communicate with the *synchronization application* and the content directory service to discover the new content data and provide update information to the content directory service regarding the new content data received by the database from the external device during the content data synchronization. For at least these reasons, the independent Claim 41 is allowable over the teachings of Carter, Hays, Gu and their combination.

The independent Claim 42 is directed to a Universal Plug and Play enabled media server. The Universal Plug and Play enabled media server of Claim 42 comprises a database to store content data, a synchronization application to perform content data synchronization with an external device, a Universal Plug and Play content directory service to browse the content data stored in the database and to provide information regarding the content data stored in the database and to maintain directory information related to new content received, and an interface layer coupled to communicate with the synchronization application and the content directory service to discover the new content added to the database and provide update information to the synchronization application regarding the new content added to the database, wherein the new content data is synchronized with the external device during a next content data synchronization, further wherein the interface layer provides the update information to the content directory service regarding the new content data received by the database from the external device during content data synchronization. As described above, Carter, Hays, Gu and their combination do not teach an interface layer coupled to communicate with the *synchronization application* and the content directory service to discover the new content added to the database and provide update information to the synchronization application regarding the new content added to the database, wherein the new content data is synchronized with the external device during a next content data synchronization. For at least these reasons, the independent Claim 42 is allowable over the teachings of Carter, Hays, Gu and their combination.

For at least the reasons given above, the Applicants respectfully submit that the claims are in a condition for allowance, and allowance at an early date would be appreciated. Should the Examiner have any questions or comments, they are encouraged to call the undersigned at (408) 530-9700 to discuss the same so that any outstanding issues can be expeditiously resolved.

Respectfully submitted,

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